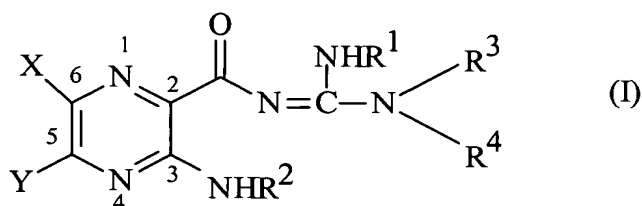


IN THE CLAIMS

Please amend the claims as follows:

- a' 1. (Amended) A compound represented by formula (I):



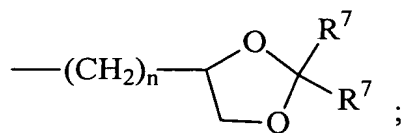
wherein

X is hydrogen, halogen, trifluoromethyl, lower alkyl, unsubstituted or substituted phenyl, lower alkyl-thio, phenyl-lower alkyl-thio, lower alkyl-sulfonyl, or phenyl-lower alkyl-sulfonyl;

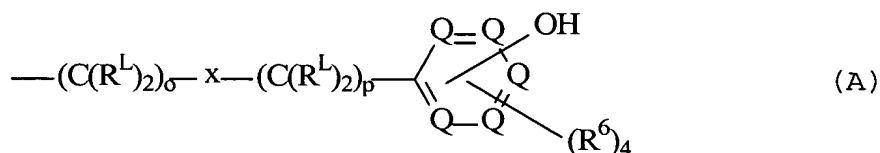
Y is hydrogen, hydroxyl, mercapto, lower alkoxy, lower alkyl-thio, halogen, lower alkyl, unsubstituted or substituted mononuclear aryl, or $-N(R^2)_2$;

R^1 is hydrogen or lower alkyl;

each R^2 is, independently, $-R^7$, $-(CH_2)_m-OR^8$, $-(CH_2)_m-NR^7R^{10}$, $-(CH_2)_n(CHOR^8)(CHOR^8)_n-CH_2OR^8$, $-(CH_2CH_2O)_m-R^8$, $-(CH_2CH_2O)_m-CH_2CH_2NR^7R^{10}$, $-(CH_2)_n-C(=O)NR^7R^{10}$, $-(CH_2)_n-Z_g-R^7$, $-(CH_2)_m-NR^{10}-CH_2(CHOR^8)(CHOR^8)_n-CH_2OR^8$, $-(CH_2)_n-CO_2R^7$, or

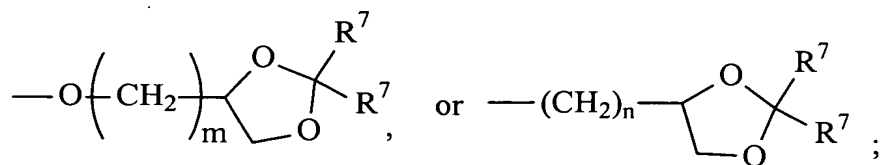


a' R^3 and R^4 are each, independently, hydrogen, a group represented by formula (A), lower alkyl, hydroxy lower alkyl, phenyl, phenyl-lower alkyl, (halophenyl)-lower alkyl, lower-(alkylphenylalkyl), lower alkoxyphenyl)-lower alkyl, naphthyl-lower alkyl, or pyridyl-lower alkyl, with the proviso that at least one of R^3 and R^4 is a group represented by formula (A):



wherein

each R^{L} is, independently, $-\text{R}^7$, $-(\text{CH}_2)_n\text{---OR}^8$, $-\text{O}-(\text{CH}_2)_m\text{---OR}^8$, $-(\text{CH}_2)_n\text{---NR}^7\text{R}^{10}$, $-\text{O}-(\text{CH}_2)_m\text{---NR}^7\text{R}^{10}$, $-(\text{CH}_2)_n(\text{CHOR}^8)(\text{CHOR}^8)_n\text{---CH}_2\text{OR}^8$, $-\text{O}-(\text{CH}_2)_m(\text{CHOR}^8)(\text{CHOR}^8)_n\text{---CH}_2\text{OR}^8$, $-(\text{CH}_2\text{CH}_2\text{O})_m\text{---R}^8$, $-\text{O}-(\text{CH}_2\text{CH}_2\text{O})_m\text{---R}^8$, $-(\text{CH}_2\text{CH}_2\text{O})_m\text{---CH}_2\text{CH}_2\text{NR}^7\text{R}^{10}$, $-\text{O}-(\text{CH}_2\text{CH}_2\text{O})_m\text{---CH}_2\text{CH}_2\text{NR}^7\text{R}^{10}$, $-(\text{CH}_2)_n\text{---C(=O)NR}^7\text{R}^{10}$, $-\text{O}-(\text{CH}_2)_m\text{---C(=O)NR}^7\text{R}^{10}$, $-(\text{CH}_2)_n\text{---(Z)}_g\text{---R}^7$, $-\text{O}-(\text{CH}_2)_m\text{---(Z)}_g\text{---R}^7$, $-(\text{CH}_2)_n\text{---NR}^{10}\text{---CH}_2(\text{CHOR}^8)(\text{CHOR}^8)_n\text{---CH}_2\text{OR}^8$, $-\text{O}-(\text{CH}_2)_m\text{---NR}^{10}\text{---CH}_2(\text{CHOR}^8)(\text{CHOR}^8)_n\text{---CH}_2\text{OR}^8$, $-(\text{CH}_2)_n\text{---CO}_2\text{R}^7$, $-\text{O}-(\text{CH}_2)_m\text{---CO}_2\text{R}^7$, $-\text{OSO}_3\text{H}$, $-\text{O-glucuronide}$, $-\text{O-glucose}$, or



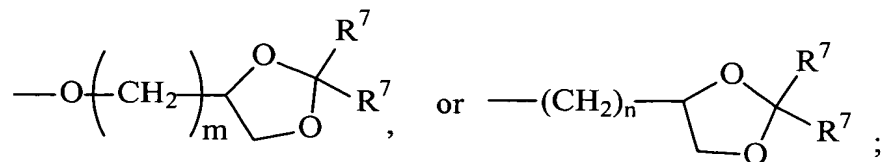
a' each x is, independently, O, NR⁷, C=O, CHOH, C=N-R⁶, or represents a single bond;

each o is, independently, an integer from 0 to 10;

each p is, independently, an integer from 0 to 10;

with the proviso that (a) the sum of o and p in each contiguous chain is from 1 to 10 when x is O, NR⁷, C=O, or C=N-R⁶ or (b) that the sum of o and p in each contiguous chain is from 4 to 10 when x represents a single bond;

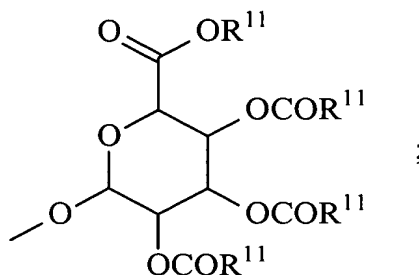
each R⁶ is, independently, -R⁷, -OH, -OR¹¹, -N(R⁷)₂, -(CH₂)_m-OR⁸, -O-(CH₂)_m-OR⁸, -(CH₂)_n-NR⁷R¹⁰, -O-(CH₂)_m-NR⁷R¹⁰, -(CH₂)_n(CHOR⁸)(CHOR⁸)_n-CH₂OR⁸, -O-(CH₂)_m(CHOR⁸)(CHOR⁸)_n-CH₂OR⁸, -(CH₂CH₂O)_m-R⁸, -O-(CH₂CH₂O)_m-R⁸, -(CH₂CH₂O)_m-CH₂CH₂NR⁷R¹⁰, -O-(CH₂CH₂O)_m-CH₂CH₂NR⁷R¹⁰, -(CH₂)_n-C(=O)NR⁷R¹⁰, -O-(CH₂)_m-C(=O)NR⁷R¹⁰, -(CH₂)_n-(Z)_g-R⁷, -O-(CH₂)_m-(Z)_g-R⁷, -(CH₂)_n-NR¹⁰-CH₂(CHOR⁸)(CHOR⁸)_n-CH₂OR⁸, -O-(CH₂)_m-NR¹⁰-CH₂(CHOR⁸)(CHOR⁸)_n-CH₂OR⁸, -(CH₂)_n-CO₂R⁷, -O-(CH₂)_m-CO₂R⁷, -OSO₃H, -O-glucuronide, -O-glucose,



wherein when two R⁶ are -OR¹¹ and are located adjacent to each other on a phenyl ring, the alkyl moieties of the two R⁶ may be bonded together to form a methylenedioxy group;

each R^7 is, independently, hydrogen or lower alkyl;

a' each R^8 is, independently, hydrogen, lower alkyl, $-C(=O)-R^{11}$, glucuronide, 2-tetrahydropyranyl, or



each R^9 is, independently, $-\text{CO}_2R^7$, $-\text{CON}(R^7)_2$, $-\text{SO}_2\text{CH}_3$, or $-C(=O)R^7$;

each R^{10} is, independently, $-\text{H}$, $-\text{SO}_2\text{CH}_3$, $-\text{CO}_2R^7$, $-C(=O)NR^7R^9$,

$-C(=O)R^7$, or $-\text{CH}_2-(\text{CHOH})_n-\text{CH}_2\text{OH}$;

each Z is, independently, CHOH , $\text{C}(=\text{O})$, CHNR^7R^{10} , $\text{C}=\text{NR}^{10}$, or NR^{10} ;

each R^{11} is, independently, lower alkyl;

each g is, independently, an integer from 1 to 6;

each m is, independently, an integer from 1 to 7;

each n is, independently, an integer from 0 to 7;

each Q is, independently, ~~$\text{C}-R^6$, $\text{C}-R^6$, or a nitrogen atom, wherein at most three Q in a ring are nitrogen atoms;~~

or a pharmaceutically acceptable salt thereof, and

inclusive of all enantiomers, diastereomers, and racemic mixtures thereof.

2. (Previously Presented) The compound of Claim 1, wherein Y is -NH_2 .

a'

3. (Previously Presented) The compound of Claim 2, wherein R^2 is hydrogen.

4. (Previously Presented) The compound of Claim 3, wherein R^1 is hydrogen.

5. (Previously Presented) The compound of Claim 4, wherein X is chlorine.

6. (Previously Presented) The compound of Claim 5, wherein R^3 is hydrogen.

7. (Previously Presented) The compound of Claim 6, wherein each R^L is hydrogen.

8. (Previously Presented) The compound of Claim 7, wherein o is 4.

9. (Previously Presented) The compound of Claim 8, wherein p is 0.

10. (Previously Presented) The compound of Claim 9, wherein x represents a single bond.

11. (Previously Presented) The compound of Claim 10, wherein each R^6 is hydrogen.

12. Canceled.

a¹

13. Canceled.

14. (Amended) The compound of Claim 1, wherein

X is halogen;

Y is $-N(R^7)_2$;

R^1 is hydrogen or C_1 - C_3 alkyl; and

R^2 is $-R^7$, $-(CH_2)_m-OR^7$, or $-(CH_2)_n-CO_2R^7$;

R^3 is a group represented by formula (A); and

R^4 is hydrogen, a group represented by formula (A), or lower alkyl[;]

15. (Amended) The compound of Claim 14, wherein

X is chloro or bromo;

Y is $-N(R^7)_2$;

R^2 is hydrogen or C_1 - C_3 alkyl;

at most three R^6 are other than hydrogen as defined above; and

at most three R^L are other than hydrogen as defined above; ~~and~~

~~at most 2 Q are nitrogen atoms.~~

16. (Previously Presented) The compound of Claim 15, wherein Y is $-NH_2$.

17. (Amended) The compound of Claim 16, wherein

*a*¹ R⁴ is hydrogen;

at most one R^L is other than hydrogen as defined above; and

at most two R⁶ are other than hydrogen as defined above; ~~and~~

~~at most 1 Q is a nitrogen atom.~~

18. (Previously Presented) The compound of Claim 17, wherein x is O, NR⁷, C=O, CHOH, or C=N-R⁶.

19. (Previously Presented) The compound of Claim 17, wherein x represents a single bond.

20. (Previously Presented) The compound of Claim 1, wherein x is O, NR⁷, C=O, CHOH, or C=N-R⁶.

21. (Previously Presented) The compound of Claim 1, wherein x represents a single bond.

22. (Previously Presented) The compound of Claim 1, wherein each R⁶ is hydrogen.

23. (Previously Presented) The compound of Claim 1, wherein at most two R⁶ are other than hydrogen as defined in Claim 1.

a1
24. (Previously Presented) The compound of Claim 1, wherein one R⁶ is other than hydrogen as defined in Claim 1.

25. (Previously Presented) The compound of Claim 1, wherein one R⁶ is -OH.

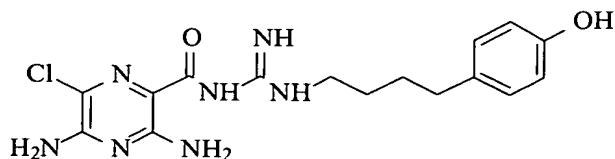
26. (Previously Presented) The compound of Claim 1, wherein each R^L is hydrogen.

27. (Previously Presented) The compound of Claim 1, wherein at most two R^L are other than hydrogen as defined in Claim 1.

28. (Previously Presented) The compound of Claim 1, wherein one R^L is other than hydrogen as defined in Claim 1.

29. (Previously Presented) The compound of Claim 1, wherein x represents a single bond and the sum of o and p is 4 to 6.

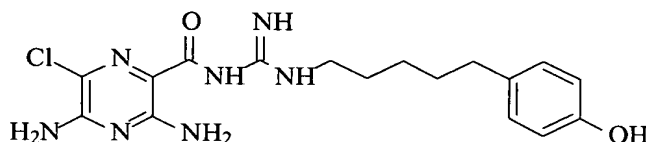
30. (Previously Presented) The compound of Claim 1, which is represented by the formula



a' 31. (Previously Presented) The compound of Claim 30, which is in the form of a pharmaceutically acceptable salt.

32. (Previously Presented) The compound of Claim 31, which is in the form of a hydrochloride salt.

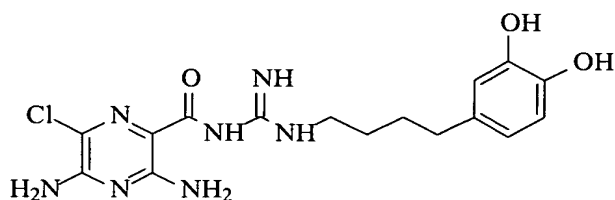
33. (Previously Presented) The compound of Claim 1, which is represented by the formula



34. (Previously Presented) The compound of Claim 33, which is in the form of a pharmaceutically acceptable salt.

35. (Previously Presented) The compound of Claim 34, which is in the form of a hydrochloride salt.

36. (Previously Presented) The compound of Claim 1, which is represented by the formula



37. (Previously Presented) The compound of Claim 36, which is in the form of a pharmaceutically acceptable salt.

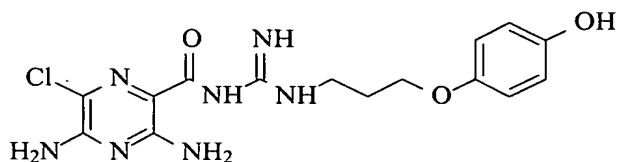
38. (Previously Presented) The compound of Claim 37, which is in the form of a hydrochloride salt.

39. Canceled.

40. Canceled.

41. Canceled.

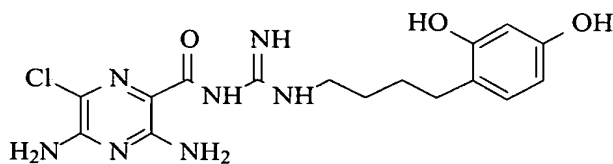
42. (Previously Presented) The compound of Claim 1, which is represented by the formula



43. (Previously Presented) The compound of Claim 42, which is in the form of a pharmaceutically acceptable salt.

44. (Previously Presented) The compound of Claim 43, which is in the form of a hydrochloride salt.

45. (Previously Presented) The compound of Claim 1, which is represented by the formula



46. (Previously Presented) The compound of Claim 45, which is in the form of a pharmaceutically acceptable salt.

a! 47. (Previously Presented) The compound of Claim 46, which is in the form of a hydrochloride salt.

48. (Previously Presented) The compound of Claim 1, which is in the form of a pharmaceutically acceptable salt.

49. (Previously Presented) A pharmaceutical composition, comprising the compound of Claim 1 and a pharmaceutically acceptable carrier.

50. (Previously Presented) A method of promoting hydration of mucosal surfaces, comprising:

administering an effective amount of the compound of Claim 1 to a mucosal surface of a subject.

51. (Previously Presented) A method of restoring mucosal defense, comprising:
topically administering an effective amount of the compound of Claim 1 to a mucosal surface of a subject in need thereof.

52. (Previously Presented) A method of blocking sodium channels, comprising:
contacting sodium channels with an effective amount of the compound of Claim 1.

53. (Previously Presented) A method of treating chronic bronchitis, comprising:

administering an effective amount of the compound of Claim 1 to a subject in need thereof.

a' 54. (Previously Presented) A method of treating cystic fibrosis, comprising:
administering an effective amount of the compound of Claim 1 to a subject in need thereof.

55. (Previously Presented) A method of treating sinusitis, comprising:
administering an effective amount of the compound of Claim 1 to a subject in need thereof.

56. (Previously Presented) A method of treating vaginal dryness, comprising:
administering an effective amount of the compound of Claim 1 to the vaginal tract of a subject in need thereof.

57. (Previously Presented) A method of treating dry eye, comprising:
administering an effective amount of the compound of Claim 1 to the eye of a subject in need thereof.

58. (Previously Presented) A method of promoting ocular hydration, comprising:
administering an effective amount of the compound of Claim 1 to the eye of a subject.

59. (Previously Presented) A method of promoting corneal hydration, comprising:
administering an effective amount of the compound of Claim 1 to the eye of a subject.

60. (Previously Presented) A method of promoting mucus clearance in mucosal
surfaces, comprising:
administering an effective amount of the compound of Claim 1 to a mucosal surface
of a subject.

61. (Previously Presented) A method of treating Sjogren's disease, comprising:
administering an effective amount of the compound of Claim 1 to a subject in need
thereof.

62. (Previously Presented) A method of treating distal intestinal obstruction
syndrome, comprising:
administering an effective amount of the compound of Claim 1 to a subject in need
thereof.

63. (Previously Presented) A method of treating dry skin, comprising:
administering an effective amount of the compound of Claim 1 to the skin of a subject
in need thereof.

64. (Previously Presented) A method of treating esophagitis, comprising:

administering an effective amount of the compound of Claim 1 to a subject in need thereof.

a1

65. (Previously Presented) A method of treating dry mouth (xerostomia), comprising:

administering an effective amount of the compound of Claim 1 to the mouth of a subject in need thereof.

66. (Previously Presented) A method of treating nasal dehydration, comprising:
administering an effective amount of the compound of Claim 1 to the nasal passages of a subject in need thereof.

67. (Previously Presented) The method of Claim 66, wherein the nasal dehydration is brought on by administering dry oxygen to the subject.

68. (Previously Presented) A method of preventing ventilator-induced pneumonia , comprising:
administering an effective amount of the compound of Claim 1 to a subject on a ventilator.

69. (Previously Presented) A method of treating asthma, comprising:

administering an effective amount of the compound of Claim 1 to a subject in need thereof.

a'

70. (Previously Presented) A method of treating primary ciliary dyskinesia, comprising:

administering an effective amount of the compound of Claim 1 to a subject in need thereof.

71. (Previously Presented) A method of treating otitis media, comprising:
administering an effective amount of the compound of Claim 1 to a subject in need thereof.

72. (Previously Presented) A method of inducing sputum for diagnostic purposes, comprising:
administering an effective amount of the compound of Claim 1 to a subject in need thereof.

73. (Previously Presented) A method of treating chronic obstructive pulmonary disease, comprising:
administering an effective amount of the compound of Claim 1 to a subject in need thereof.

74. (Previously Presented) A method of treating emphysema, comprising:
administering an effective amount of the compound of Claim 1 to a subject in need
thereof.

a'

75. (Previously Presented) A method of treating pneumonia, comprising:
administering an effective amount of the compound of Claim 1 to a subject in need
thereof.

76. (Previously Presented) A method of treating constipation, comprising:
administering an effective amount of the compound of Claim 1 to a subject in need
thereof.

77. (Previously Presented) The method of Claim 76, wherein the compound is
administered orally or via a suppository or enema.

a' 78. (Previously Presented) A method of treating chronic diverticulitis, comprising:
administering an effective amount of the compound of Claim 1 to a subject in need
thereof.

79. (Amended) ~~A~~ ~~The present invention also provides a~~ method of treating
rhinosinusitis, comprising:
administering an effective amount of the compound of Claim 1 to a subject in need
thereof.

80. (Previously Presented) A composition, comprising:
the compound of Claim 1; and
a P2Y2 inhibitor.

81. (Previously Presented) A composition, comprising:
the compound of Claim 1; and
a bronchodilator.
